

5 ABSTRACT

The present invention relates to an $N \times N$ OXC (optical cross-connect) optical switch of micro-mirrors, wherein an input optical fiber bundle is fitted to a first substrate of silicon or glass, and an output optical fiber is fitted to the first substrate at a distance from the input optical fiber bundle, to face each other. There are an input micro-mirror and an output 10 micro-mirror part between the optical fiber input part and the optical fiber output part, at a distance from the input micro-mirror part to face each other, and at 45° to a direction of an optical path of a light from the input optical fiber bundle. For fixing them, the present invention employs a method, in which grooves are formed in the first substrate, in which the third substrates of the input/output micro-mirrors and the second substrates of the input/output 15 optical fiber bundles are inserted. The present invention having the foregoing system shortens a total optical path significantly, thereby, not only reducing a total optical loss, but also enhancing a reliability, to provide large capacity, low cost optical switches.